

REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks are respectfully requested.

Upon entry of this Amendment, claims 1-3, 6, 10, and 12-16 will be pending in the present application. Claims 4, 5, 7-9, and 11 have been cancelled. Claims 13-16 have been added.

Claims 1, 6, 7, 10, and 12 stands rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,341,214 to Wong (“the ‘214 patent”) in view of published U.S. Patent Application No. 10/108,957 to O’Leary, publication no. 2002/0153490 (“the ‘957 application”). In addition, claims 2 and 3 stand rejected under 35 U.S.C. § 103 as being unpatentable over the ‘214 patent and the ‘957 application in view of U.S. Patent No. 6,369,387 to Eckles (“the ‘387 patent”). Applicant respectfully traverses these rejections for the reasons presented below.

Independent claims 1, 6, 10, and 12 have been amended to clarify the features of the present invention that distinguish these claims from the cited references. More specifically, each of these claims defines the gas flow passage as having a sample chamber that is configured such that both the gas and the infrared radiation pass through the sample chamber along a parallel. This feature of the present invention allows the infrared radiation to pass through as much of the gas sample as possible while minimizing the overall dimensions of the sample cell. In addition, claims 1, 6, 10, and 12 have been amended to indicate that the length of the gas flow passage defining the sample chamber is greater than a width of the gas flow passage. Applicant submits that the cited references do not teach or suggest a gas analyzing system or method having these features.

The ‘214 patent teaches a NDIR analyzer having a sample cell 12 that includes a gas inlet 24, a gas outlet 60, and a gas flow passage therebetween, namely area 18. A copy of Fig. 1 from the ‘214 patent is reproduced below for the Examiner’s convenience.

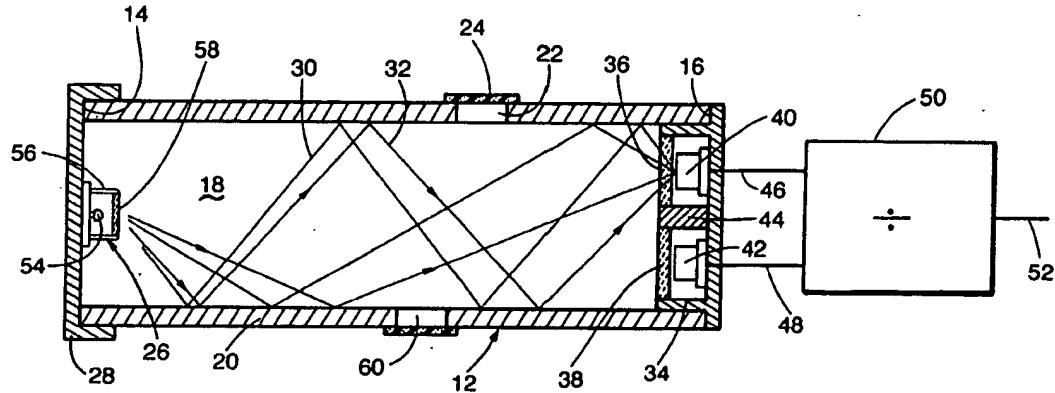


Fig. 1

Gas flows through this sample cell from inlet 24 to outlet 60 in a generally vertical direction (as oriented on this page), and infrared radiation emitted by a source 54 to detectors 40, 42 travels along an optical path in a generally horizontal direction (as oriented on this page). It can thus be appreciated that the gas flow passage and the optical path are not generally parallel, but are more likely perpendicular.

Unlike the claimed invention, the length of the gas flow passage from inlet 24 to outlet 60 is not greater than the width (the width of the gas flow passage in the '214 patent being the distance from emitter 54 to filters 36, 38). Quite the contrary, the width of the gas flow path taught by the '214 patent is clearly much longer than the gas flow passage length.

Because the width is greater than the length in the sample cell of the '214 patent, a relatively large gas accumulation space 18 is created. This results in the response time for the gas analyzer of the '214 patent being relatively slow. In the present invention, however, the response time is much faster, because the sample chamber is quickly and completely (or nearly completely) replaced with new gas entering the inlet. In other words, there is less stagnate areas or deadspace in the sample cell of the present invention.

Applicant submits that it would not be obvious to modify the sample cell of the '214 patent to correspond to the claimed features, because there is no teaching or suggestion to do so in the cited references. Applicant wishes to remind the Examiner that obviousness cannot

be based on the fact that it may be possible to modify a reference in a given way. The law requires more: that there by a teaching or suggestion of such a modification.

For the reasons presented above, applicant respectfully submits that independent claims 1, 6, 10, and 12 are not rendered obvious by the cited references. In addition, claims 2 and 3, as well as new claims 13-16, are not rendered obvious due to their dependency from one of independent claims 1, 6, 10, and 12. Accordingly, applicant respectfully requests that the above rejection of claims 1-3, 6, 7, 10, and 12 be withdrawn.

This response is being filed within the three-month statutory response period which expires on November 17, 2005. In addition, no additional claim fees are believed to be required as a result of the above amendments to the claims. Nevertheless, the Commission is authorized to charge the any fee required under 37 C.F.R. §§ 1.16 or 1.17 to deposit account no. 50-0558.

All objections and rejections have been addressed. It is respectfully submitted that the present application is in condition for allowance and a Notice to the effect is earnestly solicited.

Respectfully submitted,

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